

Name: KEY

Date: _____

Square Root Unit Practice Test

- 1) Simplify: (a) $\sqrt{64}$ (b) $\sqrt{25}$ (c) $\sqrt{1}$ (d) $\sqrt{49}$ (e) $\sqrt{81}$
 8 5 1 7 9

2) A square has an area of 36m^2 . Determine the side length (with correct units):

$\sqrt{36} = 6\text{m}$

- 3) Simplify as a fraction (a) $\sqrt{\frac{100}{9}}$ (b) $\sqrt{\frac{4}{25}} = \frac{\sqrt{4}}{\sqrt{25}}$ (c) $\sqrt{\frac{16}{36}} = \frac{\sqrt{16}}{\sqrt{36}}$ (d) $\sqrt{\frac{81}{49}} = \frac{\sqrt{81}}{\sqrt{49}}$
 In lowest terms: $= \frac{\sqrt{100}}{\sqrt{9}} = \left(\frac{10}{3}\right)$ $= \left(\frac{2}{5}\right)$ $= \frac{4}{6} = \left(\frac{2}{3}\right)$ $= \left(\frac{9}{7}\right)$

4) Simplify first without a calculator, and then confirm with a calculator.

- a) $\sqrt{0.25}$ (b) $\sqrt{0.01}$ (c) $\sqrt{0.81}$ (d) $\sqrt{0.0036}$ (e) $\sqrt{0.0004}$
 0.5 0.1 0.9 0.06 0.02

5) What is the answer to $\sqrt{-16}$? Explain: *Can't multiply two identical numbers that result in a negative product*
No answer

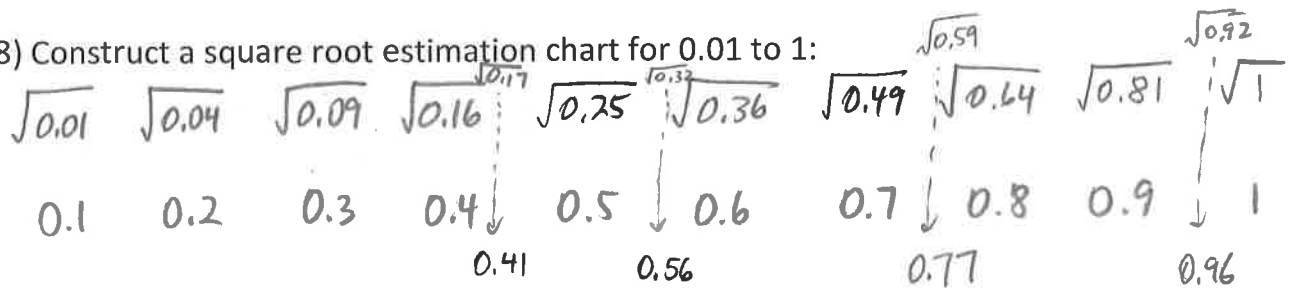
6) Make a square root estimation chart for 1 to 100:

$\sqrt{1}$	$\sqrt{4}$	$\sqrt{9}$	$\sqrt{16}$	$\sqrt{25}$	$\sqrt{36}$	$\sqrt{49}$	$\sqrt{64}$	$\sqrt{81}$	$\sqrt{100}$
1	2	3	4	5	6	7	8	9	10

7) Using the chart above, estimate the square root of:

- a) $\sqrt{10}$ (b) $\sqrt{75}$ (c) $\sqrt{40}$ (d) $\sqrt{21}$ (e) $\sqrt{62}$ (f) $\sqrt{86}$
 3.1 8.6 6.3 4.5 7.8 9.2
 or or or or or
 3.2 8.7 4.6 7.9 9.3

8) Construct a square root estimation chart for 0.01 to 1:



9) Using the chart above, estimate the square root of:

- a) $\sqrt{0.17}$ b) $\sqrt{0.32}$ c) $\sqrt{0.92}$ d) $\sqrt{0.59}$
- 0.41 0.56
or
0.57 0.96 0.77

- 10) Estimate without a calculator: a) $\sqrt{\frac{26}{37}}$ b) $\sqrt{\frac{42}{10}} = \sqrt{4.2}$
- $\approx \frac{\sqrt{25}}{\sqrt{36}} = \frac{5}{6} = 0.83$ $\sqrt{4}$ $\sqrt{9}$
- 2 2.1 3

- 11) Simplify: (a) $\sqrt[3]{27}$ (b) $\sqrt[3]{216}$ (c) $\sqrt[4]{16}$
- 3 6 2
- b/c $3 \times 3 \times 3 = 27$ b/c $6 \times 6 \times 6 = 216$ b/c $2 \times 2 \times 2 \times 2 = 16$

12) Find the missing variable to the nearest tenth

